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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,227

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Michael Guggemos

36605

3740

7590

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EXAMINER

VAN, LUAN V

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

05/27/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,227	<b>Applicant(s)</b> GUGGEMOS ET AL.	
	<b>Examiner</b> LUAN V. VAN	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-12,14,15,17-23,35-37,39-45,47-50,52 and 53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12,14,15,17-23,35-37,39-45,47-50,52 and 53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 21, 2010 has been entered.

### ***Response to Amendment***

Claims 1, 2, 5-12, 14, 15, 17-23, 35-37, 39-45, 47-50, 52, and 53 are pending in the present application.

### ***Status of Objections and Rejections***

All rejections from the previous office action are withdrawn. New grounds of rejection under 35 U.S.C. 103(a) are necessitated by the amendments.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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Claims 1, 2, 5-12, 14, 15, 17-23, 35-37, 39-45, 47-50, 52, and 53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended limitation in independent claims 1 and 35 reciting that the "ceiling members (9, 23) each being attached to the cell wall (10)... to be in contact with the conveying path so that they seal the conveying path opening and wipe off any liquid from the work pieces passing by" is deemed to be new matter, because the specification does not support sealing member (9) being able to perform this function since sealing member (9) does not extend or touch the substrate as seen in Fig. 2. Therefore, the amended limitations are deemed to be new matter.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 35-37, 39-45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. (US patent 5425862) in view of either Cooke et al. '190 (US 3359190) or Cooke et al. '222 (US 3535222).

Regarding claim 35, Hartmann et al. teaches a device for electroplating a substrate, said device comprising: a) at least one arrangement, comprising at least one

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electrode (9-16, Fig. 1) for contacting the work pieces (1) and at least one electrolysis region in a respective one of which at least one counter electrode (24, 25) and the work pieces (1) are in contact with the processing liquid, characterized in that b) the at least one contacting electrode (9-16) is disposed outside of the at least one electrolysis region and is not in contact with the processing liquid, and c) the at least one contacting electrode (9-16) and the at least one electrolysis region are spaced so close together that small electrically conductive structures can electrolytically be treated, further characterized in that d) at least two contacting electrodes (9-16) are provided, at least one of them being disposed on one side of the electrolysis region and the at least other one on the other side of the electrolysis region (i.e., the electrodes 9-16 are provided on both sides of the electroplating chambers 6-8, see Fig. 1), and e) the electrolysis region are in constant electrical contact with one of the contacting electrodes (9-16).

Hartmann et al. differs from the instant claims in that the reference does not explicitly teach sealing members attached to the cell wall or whether the isolation material covers the entire face of the conveying path of the work pieces.

Cooke et al. '190 teaches an electrolytic treatment apparatus comprising sealing members 23, 24 mounted in the end walls to provide narrow, horizontal entrance and exit slots through which the substrate may enter and leave, in a liquid-tight sealed relation, thus completing the separate enclosure for the bodies of the electrolyte (column 6 lines 12-19). Cooke et al. '222 also teaches sealing members 86, 87 attached to the end plate 75 of the electrolytic treatment chamber for inhibiting or preventing

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escape of the electrolyte from the end slots where the strip enters and leaves (column 6 lines 42-61).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have attached the sealing members of either Cooke et al. '190 or Cooke et al. '222 on the exit chamber wall of Hartmann et al., because it would prevent the escape of the electrolyte from the exit.

Further addressing claim 35, Hartmann et al. teaches a tampon of soft, open-pored plastic foam (column 4 lines 10-20) is positioned on both sides between the plastic film and a stationary part (i.e., anode). Hartmann et al. further teaches that this tampon lend the plastic film a certain stability so that sporadic yielding or buckling out is made more difficult (column 4 lines 15-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the size of the tampon of Hartmann et al. to cover the entire face of the substrate, because it would further increase the stability of the substrate within the electrolytic chamber, thus minimizing sporadic yielding or buckling.

Regarding claim 36, Hartmann et al. teaches a plurality of electrolysis regions (Fig. 1).

Regarding claim 37, Hartmann et al. teaches an upper anode 24 and a lower anode 25 (Fig. 2).

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Regarding claim 39, it is the examiner's position that the processing liquid is under pressure in the electroplating chamber of Hartmann et al., since the processing liquid is pumped into the chamber and the chamber is sealed by the squeegee rollers.

Regarding claim 40, Hartmann et al. teaches sealing rollers 22 (Fig. 2).

Regarding claim 41, Hartmann et al. teaches sealing rollers 22 (Fig. 2), but does not explicitly teach an auxiliary sealing roller. However, providing the additional auxiliary sealing roller would have been duplication of the subject matter. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the auxiliary sealing rollers by duplicating the sealing rollers of Hartmann et al. in order to provide additional sealing to the electroplating chamber.

Regarding claim 42, since the plastic foam has open pores (column 4 lines 10-20), it is ion-permeable.

Regarding claim 43-45, and 47, since the plastic foam is positioned between the plastic film and the anode, it prevents the plastic film from contacting the anode.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartmann et al. in view of either Cooke et al. '190 or Cooke et al. '222, and further in view of Geissler et al. (US 6238529).

Hartmann et al. teaches the apparatus as described above. Hartmann et al. differs from the instant claims in that the reference does not explicitly teach inner partition walls.

Geissler et al. teach an electroplating apparatus for treating printed circuit boards that are continuously guided in a plane of convenience in a substantially horizontal direction, and apparatus comprising an electroplating chamber having inner and outer walls 17 (Fig. 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the inner walls of Geissler et al. in the apparatus of Hartmann et al., because it would improve the sealing of electroplating chamber.

### ***Response to Arguments***

Applicant's arguments filed on May 21, 2010 have been fully considered. In the arguments presented on page 9 of the amendment, the applicant argues with respect to claim 1 that Hartmann et al. does not teach the combination of a contacting electrode washing station for washing the contacting electrode and a cell wall having a pair of sealing members. The examiner acknowledges that the cited prior art does not teach this combination, therefore the rejection over independent claim 1 has been withdrawn. However, independent claim 35 does not require the washing station/rinsing facilities, therefore independent claim 35 remains rejected. Cooke et al. '190 and Cooke et al. '222 are now relied on to teach attaching sealing members to the exit wall of an electrolytic chamber. With respect to the limitation having the isolation material covering the entire face of the conveying path in claim 35, the obviousness rejection is applied as stated above.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUAN V. VAN whose telephone number is (571)272-8521. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LUAN V VAN/  
Examiner, Art Unit 1795  
May 25, 2010